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A practical guide to reflexivity in qualitative research: AMEE Guide No. 149

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ABSTRACT

Qualitative research relies on nuanced judgements that require researcher reflexivity, yet reflexivity is often addressed superficially or overlooked completely during the research process. In this AMEE Guide, we define reflexivity as a set of continuous, collaborative, and multifaceted practices through which researchers self-consciously critique, appraise, and evaluate how their subjectivity and context influence the research processes. We frame reflexivity as a way to embrace and value researchers' subjectivity. We also describe the purposes that reflexivity can have depending on different paradigmatic choices. We then address how researchers can account for the significance of the intertwined personal, interpersonal, methodological, and contextual factors that bring research into being and offer specific strategies for communicating reflexivity in research dissemination. With the growth of qualitative research in health professions education, it is essential that qualitative researchers carefully consider their paradigmatic stance and use reflexive practices to align their decisions at all stages of their research. We hope this Guide will illuminate such a path, demonstrating how reflexivity can be used to develop and communicate rigorous qualitative research.

KEYWORDS

Reflexivity; qualitative research; qualitative methods

Introduction

As qualitative research has gained credibility in health professions education (HPE) scholarship (Varpio and Meyer 2017), the field's understanding of rigorous research processes has been refined. In this orientation, markers for research rigor are fundamentally different from those commonly used in quantitative research (Tracy 2010; Varpio et al. 2017). Whereas much of quantitative research strives to reveal (or at least approximate) fundamental truths that are as free as possible from researcher "bias" (Young and Ryan 2020), qualitative research depends on subjectivity (Rees et al. 2020). Qualitative researchers engage in reflexivity to account for *how* subjectivity shapes their inquiry. Reflexivity is tied to the researcher's ability to make and communicate nuanced and ethical decisions amid the complex work of generating real-world data that reflect the messiness of participants' experiences and social practices (Finlay 2002a). In other words, their subjective perspective (or "bias") is fundamentally intertwined with qualitative research processes. And while the researcher's perspective has many positive impacts, failure to attend to reflexivity can negatively impact the knowledge built via qualitative research and those connected to it. For example, failing to account for unexpected power dynamics between participant and interviewer can lead to situations where some participants feel pressured to disclose personal details that they are not comfortable talking about, or feel silenced, preventing them from sharing the fullness of their experience. In such cases, participants can be harmed and data quality suffers. Engaging in reflexivity can help researchers avoid such pitfalls (Finlay 2002a).

Practice points

- Qualitative researchers should capitalize on reflexivity throughout their research process.
- Reflexivity should be oriented towards personal, interpersonal, methodological, and contextual issues in the research.
- Reflexivity should involve concrete practices.
- The entire research team needs to collaborate on reflexivity processes.
- Reflexivity should be multi-dimensional and presented throughout the whole manuscript when writing up research.

Unfortunately, reflexivity is often only vaguely understood by many and, as a result, is poorly addressed in most qualitative publications. This ambiguity can be mapped to several issues. For instance, there are many definitions of reflexivity, each foregrounding different key issues (Schwandt 2014). As a result, navigating the reflexivity literature and the myriad of methods for applying it is a difficult task for many researchers (D'Cruz et al. 2005; Finlay and Gough 2008). Furthermore, reflexivity is anchored in an orientation that values subjectivity and requires researchers to explore their influence on

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research, as its meaning is actively constructed through the research process (Varpio et al. 2021). This orientation runs counter to the post-positivist assumptions, tied to quantitative research, that have historically held sway in HPE (Varpio et al. 2017). Given such issues, it is not surprising that HPE scholars are often lost in a fog of uncertainty when it comes to understanding what reflexivity is and how to use it. And yet, despite this uncertainty, there is increasing recognition that reflexivity is an essential aspect of qualitative studies (Barrett et al. 2020), so many researchers hesitantly wade into the reflexivity waters. We believe that delineating a nuanced definition of reflexivity and offering examples of the concrete reflexive practices available can help HPE scholars to develop and communicate rigorous qualitative research.

In this AMEE Guide, we hope to achieve that goal. To that end, we clarify what reflexivity means and entails, and we offer specific methods of engaging in reflexivity while conducting and disseminating research. We answer some of the most common challenges HPE researchers face vis-a-vis reflexivity: What is reflexivity? What are its purposes? What types of reflexivity are important in HPE research? What strategies can I use to practice reflexivity in my HPE research? How do I communicate reflexivity in my manuscript? What are the most common critiques of reflexivity?

What is reflexivity?

Many different definitions of reflexivity exist, and, as a result, researchers are often left unsure of what reflexivity is, let alone how to do it. To construct a comprehensive definition of reflexivity that both respected the variety of definitions available and appreciated the differences between them, we searched the qualitative methodological literature for publications focused explicitly on reflexivity. We then inductively analyzed them to identify congruences. Table 1 provides examples of some of the descriptions we encountered, which are incorporated in the definition provided below. We then synthesized these findings to develop the following comprehensive definition:

> Reflexivity is a set of continuous, collaborative, and multifaceted practices through which researchers self-consciously critique, appraise, and evaluate how their subjectivity and context influence the research processes.

Our definition highlights that reflexivity is an ongoing process that extends across the entire duration of a research endeavor. We emphasize its shared and cooperative nature; reflexivity must be integrated into the research team dynamic to be most effective. We also stress the multifaceted nature of reflexivity; it involves critical attention to personal, interpersonal, methodological, and contextual factors that influence the study being conducted. We recognize that this composite framing of reflexivity is not often present in HPE's qualitative research. In our field, we have tended to highlight the personal aspect, describing each collaborator's subjectivity. We contend that reflexivity is broader and more nuanced, so our definition and application must be revised to reflect that heterogeneity and complexity.

The reflexivity definition we propose is anchored in orientations to research that embrace researcher subjectivity (e.g. subjectivism, social constructionism). We do not conceive reflexivity as an apology for the lack of objectivity in a research project. From a constructionism perspective, the goal is not to achieve an accurate or impartial representation; this is neither possible nor desirable (Rees et al. 2020). Instead, we conceive of reflexivity as rooted in a respect for and a valuing of subjectivity. It is part of how qualitative researchers account for the significance of the intertwined personal, interpersonal, methodological, and contextual factors that bring research into being.

What are the purposes of reflexivity?

There are several different goals held by researchers when they engage in reflexivity, including neutralizing the influence of their subjectivity, acknowledging it, explaining it, or capitalizing on it (Gentles et al. 2014). These purposes point to different ways researchers might think about the relationships between their identity, context, and research.

When it is positioned to neutralize the impact of researcher subjectivity, reflexivity refers to the researchers' attempts to take a *tabula rasa* approach—i.e. to adopt a blank slate, a perspective of objective distance from which to study a phenomenon afresh. This neutralizing work is, for example, approached in transcendental phenomenology via "bracketing" (Gearing 2004; Neubauer et al. 2019). Bracketing is a process through which researchers attempt to set aside any aspects of themselves (e.g. knowledge of pre-existing theories, personal views, etc.) that might influence their study (Neubauer et al. 2019). This neutralizing effort is still present in some branches of qualitative research. For example, grounded theory was originally grounded in post-positivism, and researchers were encouraged to come to their research as a 'blank slate' with no perspective or prior knowledge whatsoever (Glaser and Strauss 2017). Transcendental phenomenology sought to 'bracket' the researcher's perspective and eliminate (as far as possible) its influence on the research process (Neubauer et al. 2019). However, this perspective has largely fallen out of favor with modern qualitative researchers who see the goal of utterly neutralizing researcher influence as problematic and even impossible (Levasseur 2003; Pillow 2003). To illustrate, anthropologists once attempted to frame themselves as outsider-researchers who could see a culture with fresh, indifferent eyes (Paradis and Sutkin 2017). However, modern anthropologists now acknowledge that these neutralizing attempts galvanized a hierarchy between researcher and participant by positioning researchers as neutral observers who stood apart from and above the studied population, and comprehended truths inaccessible to their participant-subjects (Pillow 2003; Marcus 2011; Holmes 2020). Thus, in line with these developments and those across other qualitative methodologies, we leave behind the neutralizing purpose of reflexivity.

Moving beyond neutralizing, the primary role of reflexivity has also been seen as acknowledging subjectivity. With this end in mind, reflexivity is conceived of as making explicit that researcher subjectivity has influenced each step of the research endeavor (Russell and Kelly 2002). However, simply acknowledging this influence does nothing to elucidate the effect of that influence on the data, participants, context, or researcher. Therefore, we contend that framing the purpose of reflexivity solely as acknowledging researcher influence is a weak conceptualization of it.

Some scholars, attempting to extend beyond acknowledgement, have proposed that reflexivity's purpose is to explain the researcher's impact on the investigation. In this orientation, thinking through and explaining their influence

Table 1. Commonly cited definitions of reflexivity from the field of qualitative research.

Reference	Definition
(Walsh 2003)	"That which turns back upon (or takes account of) itself or the person's self"
(Dowling 2006)	"The analytic attention to the researcher's role in qualitative research. A continuous self-critique and self-appraisal where the researcher explains how his or her own experience has or has not influenced the stages of the research process."
(Gentles et al. 2014)	"The generalized practice in which researchers strive to make their influence on the research explicit -to themselves and to their audience."
(Finefter-Rosenbluh 2017)	"A continual internal dialogue and critical self-evaluation of the researcher's positionality (Pillow 2003), which leaves the researcher changed in its wake (Mauthner and Doucet 2003)."
(Russell and Kelly 2002)	"A process of honoring oneself and others in our work through an awareness of the relational and reflective nature of the task."
(Finlay 2002b)	"A thoughtful, conscious self-awareness that encompasses continual evaluation of subjective responses, intersubjective dynamics and the research process itself"
(Kuehner et al. 2016)	"A strategy of using subjectivity to examine social and psychosocial phenomena, assuming that social discourses are inscribed in and social practices are embodied by the researcher."
(Malterud 2001)	"Attending systematically to the context of knowledge construction, especially to the effect of the researcher at every step of the research process."

on their research enables researchers to enhance the confirmability (the degree to which the results could be confirmed by other researchers) and transferability (the degree to which the results can be applied to other settings) of the findings (Koch and Harrington 1998; Malterud 2001). However, when reflexivity's purpose stops at simply explaining researchers' influence, we risk limiting the potential value of subjectivity, often falling into an apologetic stance, confessing their subjectivities through the lens of "bias." Thus, the approach to explaining reflexivity can devolve into *mea culpa* statements that undermine the goals of qualitative research (Lingard 2015).

Finally, many contemporary qualitative researchers strive to capitalize on their subjectivity and consider it an integral part of data generation (Finlay 2002b; Charmaz 2014; Koopman et al. 2020). These researchers not only assume that subjectivity cannot be erased from the research process, they believe that such efforts are detrimental to the research. From this perspective, a researcher's influence is not something to be neutralized, merely acknowledged, or explained away. On the contrary, since subjectivity is a productive result of all human interaction, it can be an asset to actively co-construct data and results (Finlay 2002a; Koopman et al. 2020). In this orientation, reflexivity is a means of capitalizing on the researcher's knowledge and identities. Two factors that propelled the central role of reflexivity in qualitative research were the proliferation of projects that considered research's social and political implications and the rise of participatory methodologies (England 1994; Kuehner et al. 2016; Koopman et al. 2020). Participatory approaches in qualitative research include a range of methodologies that occupy common ground in enlisting participants as co-researchers (Finlay 2002b). In participatory research, both the researcher and the participants are identified as reflexive beings (Bergold and Thomas 2012). This includes involving participants in a reflexive dialogue with the researchers and among themselves throughout the lifecycle of the project, which pushes the researcher into confronting, modifying and honing their interpretations of the data (Smith 1994). The idea of capitalizing on researcher and participant subjectivities has since expanded beyond participatory research methods and, we argue, can enhance reflexivity in any qualitative methodology.

What Orientations can researchers use to engage in reflexivity?

With these different reflexivity purposes in mind, we can now differentiate between the types of reflexivity available to researchers. Qualitative methodologists have proposed various reflexivity typologies (Finlay 2002a; Walsh 2003; D'Cruz et al. 2005), though none have gained prominence within HPE or beyond. In this AMEE Guide, we present Walsh's (2003) approach since it constitutes a broad and comprehensive typology of reflexive practices relevant throughout the life of a research project. We integrate our description of each type of reflexivity with the purposes described above because each reflexivity can take a different shape depending on the researcher's goals. Typologies such as Walsh's need to be embedded within a broader understanding of reflexivity, as an abstract concept (see definition and purposes provided above) and as a part of a research project and manuscript (see application principles in the sections to follow). According to Walsh, there are four overlapping and interacting dimensions of reflexive processes: personal, interpersonal, methodological and contextual. To make these processes as tangible and easily applicable as possible, we will use one of our studies (Olmos-Vega et al. 2018) to demonstrate how each type of reflexivity might manifest in a research project and what questions researchers might ask themselves concerning each. We summarize this study in Box 1 and then illustrate how reflexivity can be applied after describing each of Walsh's dimensions.

Box 1. Summary of and reflexivity orientations applied in *Unravelling residents' and supervisors' workplace interactions: an intersubjectivity study Olmos-Vega, F. M., Dolmans, D. H. J. M., Guzmán-Quintero, C., Stalmeijer, R. E., & Teunissen, P. W.* (2018).

Case Summary A constructivist grounded theory study, conducted by the first author of this Guide (FOV), explored how residents and supervisors came to a shared understanding of how to provide patient care jointly. The study took place in an anesthesiology department in Bogotá, Colombia. 11 residents from different training levels and 18 clinical supervisors with varying years of teaching experience participated. We conducted the study under a constructivist paradigm while using a sociocultural theoretical framework to understand learning. The interdisciplinary research team consisted of an anaesthesiologist pursuing a PhD in HPE (FOV), an anthropologist, two educationalists, and an obstetrician with expertise in workplace learning. The principal investigator was a clinical supervisor in the anesthesiology department during data generation and analysis and, as such, had previous working relationships with all the participants. The rest of the team were outsiders to the research context; they had no prior contact with the participants or the research field. We generated data first through focus groups with residents and supervisors and then through field observation. Focus groups with supervisors were held independently from those with residents. The first author moderated the focus groups with an observer (the anthropologist). Then, the anthropologist conducted five months of non-participant observation in the Operating Room, the outpatient clinic, various hospital wards, and the labour ward.

Personal reflexivity

Personal reflexivity (Box 2) requires researchers to reflect on and clarify their expectations, assumptions, and conscious and unconscious reactions to contexts, participants, and data (Walsh 2003; Dowling 2006; Gentles et al. 2014). The researcher's participation is a significant aspect of the research process that should be analyzed and interpreted. Engaging in personal reflexivity should go beyond disclosing each investigator's background and training; it should include descriptions of how the researcher's prior experiences and motivations might influence the decisions made throughout the project (Finlay 2002b), whether that influence is positive, negative, or neither. Personal reflexivity ought to occur continuously across the duration of the investigation and should be interwoven with all aspects of the project—i.e. from the project's conception to research outputs. Additionally, personal reflexivity should address the impact of the research on the researchers (Mauthner and Doucet 2003; Finefter-Rosenbluh 2017). Engaging in a personal reflexive exercise can be a powerful learning experience (Mann et al. 2009); it can reshape a researcher's practices and catalyze other kinds of change (Finlay 2002a; Koopman et al. 2020). However, it is also essential to consider potentially negative impacts; for example, discussing loss and grief with participants may trigger intense emotions for researchers who share those experiences (Rowling 1999).

Box 2. Personal reflexivity

Personal Reflexivity	I (FOV) was the primary investigator in this study, conducted as part of my PhD research in Health Professions Education. All of my colleagues and residents were aware of this aspect of the study context. Being an insider researcher, many of my research ideas stemmed from personal experiences and observations as a clinical supervisor. As a supervisor, I often work closely with residents from across the graduate medical education continuum. Based on these experiences and informal conversations with my colleagues, I noticed the complexities involved in arriving at a mutual understanding about how to work with residents. I was disappointed by the lack of information available in the literature to help guide my thinking. My supervisors' experiences enabled me to appreciate the importance of looking at the supervisor-resident dyad as a unit of analysis. While many care providers are working with residents, the construction of a shared understanding of how to offer care to a specific patient was deeply enmeshed in the dynamics of these dyads. By using this personal insight, I shaped my study to focus on supervisory dyads.
Ask yourself: how are our unique perspectives influencing the research?	The first crucial step in my personal reflexivity involved reflecting on how I usually work with my residents and managing my assumptions around how my peers think about and experience supervision. During data generation and analysis, I started to uncover many nuances involved in working with residents in supervisory dyads through the experiences of my colleagues. I saw myself trying out new ways to supervise my residents and adapt to their uniqueness. As a result, I gained new supervisory tools and approaches that allowed me to adapt to each resident's needs and preferences in each situation.

Interpersonal reflexivity

Interpersonal reflexivity (Box 3) refers to how the relationships surrounding the research process influence the context, people involved, and results (Walsh 2003). Likely the most significant of these are the relationships between researchers and participants. A thoughtful approach to interpersonal reflexivity involves recognizing and appreciating participants' unique knowledge and perspectives and attending to their impacts on the research process—e.g. how they interpret our questions. Conversely, the information and insights shared by participants will directly influence researchers' decisions and results. However, this recognition and appreciation do not stem from a neutral space; interpersonal reflexivity must include an analysis of the power dynamics at play (Finlay 2002a). Though these dynamics are by no means universal or fixed, researchers often occupy power positions relative to participants, as the interpreters of their views, arbiters of what counts as "valid" information, and holders of widely recognized credentials. Thus, data can only be understood as a product of the unique power relationship between researcher and participants (England 1994; Finlay 2002b; Pillow 2003; Burns et al. 2012). In this regard, interpersonal reflexivity overlaps with contextual reflexivity (discussed below) and requires a nuanced appreciation of power in the research context. One of the aims of acknowledging this dynamic might be to temper or manage its influence on participants and data.

Box 3. Interpersonal reflexivity

Interpersonal Reflexivity: Power	I was an insider during my study of clinical supervision. But I was not just any insider: I was a clinical supervisor in the department in which we conducted the study. In other words, the participants were colleagues I worked with and residents I supervised. I also did my residency training in the same department, which meant that most of my colleagues had been my supervisors at some point. Consequently, my interactions in the research space were influenced by experiences as a supervisor and as a (former) resident. I had to carefully think through and document how these existing relationships and my position in the context impacted my data and the context itself. For example, being known in the context gave me access to many participants; however, I had to mediate any pre-existing differences of opinion with or feelings about the supervisors and/or residents to uncover their clinical supervision experiences. In addition, I had to consider how existing power dynamics were shaping my interactions with residents—e.g. would they highlight the more positive experiences they had with me as a supervisor, or would those who did not like my supervisory style avoid participating in the study as a result of our previous encounters? Different dynamics shaped my interactions with supervisors—e.g. some of my former supervisors could have felt pressure to ascribe to my views on supervision or may have felt that they were being evaluated.
Ask yourself: what relationships exist and how are they influencing the research and the people involved? What power dynamics are at play?	

Another dimension of interpersonal reflexivity includes how the relationships among the research team members unfold and impact the research (Barry et al. 1999; Russell and Kelly 2002). Reflexive research collaboration involves active and ongoing exploration of the interplay between team members' motivations, expectations, and assumptions, while examining how these perspectives and dynamics can be leveraged or managed. It also includes reflecting on and documenting disagreements on main research issues, including differences in researchers' paradigms and perspectives (Leggatt-Cook et al. 2011). Engaging in this type of interpersonal reflexivity is a collaborative effort involving all members of the research team.

Methodological reflexivity

The third type of reflexivity is methodological reflexivity (Box 4), where researchers critically consider the nuances and impacts of their methodological decisions. It often begins with thoughtful consideration of researchers' paradigmatic orientation(s) (Walsh 2003). A paradigm is a worldview that informs research efforts and, as such, reverberates throughout the research processes and impacts results (Varpio and MacLeod 2020). Choosing or acknowledging a paradigm entails opening and foreclosing particular possibilities, so using methodological reflexivity implies understanding the boundaries that a chosen paradigm imposes upon the research (Raven 2006). At the outset, researchers need to be reflexive about aligning their methodological choices with their paradigm and theoretical or conceptual framework (Varpio et al. 2020). Researchers must also remember that qualitative inquiry is embedded in and reactive to rich contexts, that is why methodological decision making should not be set at the beginning of the research process. Instead, reflexive researchers are constantly making decisions and reacting to their data or unforeseen circumstances (Varpio et al. 2020). Thus, methodological reflexivity means focusing on the meaning of these decisions and ensuring that they are ethical, rigorous, and paradigmatically aligned.

Box 4. Methodological reflexivity

Methodological Reflexivity **Ask yourself:** How are we making methodological decisions and what are their implications?	We conducted our study from a constructivist paradigm, using a sociocultural theory (Billett's Co-participation Theory) to inform our theoretical framework and constructivist grounded theory as methodology. This approach allowed us to explore a social process through the participants' and researchers' voices, capitalizing on my role as an insider co-constructing data. Although we believe this was the best methodological approach, it was certainly not the only option. I remember that one of the authors suggested using Actor-Network Theory (ANT) to explore our findings. Although they had agreed with the initial theoretical framework, they felt we were missing essential elements in our analysis of field observations. By choosing ANT, a socio-material framework, this author argued, we could investigate how different material artefacts (physical spaces, objects, or organizational protocols) influence supervisory dyads. After considerable group discussion, we decided to stick with our initial theoretical framework since co-participation theory would also allow us to focus on essential aspects of the interpersonal relationship between resident and supervisor. Being methodological reflexive entailed understanding both the affordances and shortcomings of our choices and making these implications explicit in the manuscript. This example also demonstrates the need to evaluating continously the alignment of our paradigm and theoretical framework when making methodological decisions in data generation and analysis.

Contextual reflexivity

The last type of reflexivity is contextual reflexivity (Box 5); it refers to locating a particular project in its cultural and historical context (Walsh 2003). It highlights how the research questions and their answers are embedded in and influenced by a social field of assumptions and practices (Naidu and Sliep 2011). Contextual reflexivity also entails understanding how research transforms the social field in which it is conducted in ways that are both intended and unintended (Smith 1994; Reid et al. 2018). Ethical research seeks to positively impact the contexts in which it takes place; new insights can be generated from how participants' reflections or engagement in the study affects their practices and context (Bishop et al. 2002).

Box 5. Contextual reflexivity

Contextual Reflexivity **Ask yourself:** How are aspects of context influencing the research and people involved?	Being contextually reflexive in our study entailed understanding the unique setting of the study—an anesthesiology department in a high-complexity, urban, academic hospital. Supervisor-resident relationships in this context tend to be intense and continuous, often in a 1:1 ratio. This meant that supervisory dyads worked together closely while caring for patients, which could be different from other disciplines, types of hospitals, or areas with fewer resources. The specific department we studied also encouraged a less hierarchical workplace structure and culture. Therefore, it was necessary to reflect on and report on how this context uniquely shaped interactions between supervisors and residents. In addition to reflecting on how the context impacted the research, I reflected on how my research impacted the context. I held informal conversations with some of my colleagues during non-participant observation. We discussed the feeling of being observed by a stranger and how observation could feel like an evaluation. Through these trust-building discussions, my colleagues often exchanged impressions about how they usually worked with the residents. People repeatedly questioned their decisions and practices while asking me the right way to do it. It was evident that this study caused participants to reflect on their supervisory choices and those of their peers.

How can I harness reflexivity in my research?

Putting these reflexivity purposes and types into action requires planning and concrete practices. Given that reflexivity is an ongoing process comprised of multiple dimensions, it is not surprising that there are several practices to choose from, many of which might be used throughout the research process (Finlay and Gough 2008). The methods we present below fall under two main umbrellas – reflective writing and collaborative reflection.

Reflexive writing is perhaps the best-known set of approaches to reflexivity. It includes forms of documentation such as researcher memos, field notes, and other written or recorded reflections occurring at any point in the research process. Journaling might be used to bring intention to the researchers' perspectives and assumptions to the research process (Watt 2007; Ortlipp 2008; Mruck and Mey 2019). Memos and field notes might be used to document critical interpersonal dynamics impacting participants and their data; to record and probe decisions and to call attention to and build on moments of analytic insight (Birks et al. 2008); or to call attention to aspects of context that may impact or be impacted by the study activities (Lempert 2007). When taken up consistently and thoughtfully, these processes can be an essential tool to bring intention to what can be a nebulous process of examining the assumptions, decisions, contexts, and power dynamics at play in the research process. Additionally, they can provide a foundation and highlight gaps in the researchers' knowledge and thinking (Mruck and Mey 2019).

The second set of reflexivity strategies is centered on collaboration. The task of uncovering one's blind spots is challenging. How do you see what you cannot see?

Collaborative reflexivity acknowledges that qualitative researchers rarely engage in reflexivity alone, in isolation from the research team; instead, research collaborators often rely on each other to ask difficult questions about assumptions and decisions (Bieler et al. 2021). Because assumptions become most evident when viewed from the point of view of others who do not share them, diversity of perspectives and training on a research team can be quite beneficial for reflexivity as well as a collaborative (or at least dialogic) relationship with participants (Barry et al. 1999). However, power dynamics can threaten open communication. Thus, building a solid foundation of trust and a culture of mutual responsibility for ethical and rigorous research within a team and between team members and participants, regardless of seniority and status, is necessary. Such relationships allow space for all to question assumptions and decisions (Linabary et al. 2020).

Collaboration and reflexive writing are not mutually exclusive strategies–for example, team reflexive dialogue may be grounded in individual or group reflective writing and collaboration. We also note strategies are likely to address more than one type/dimension of reflexivity. Thus, there is no need to apply them all into a single project, and this list is by no means exhaustive. Instead, we offer these strategies as exemplars to demonstrate concrete and practical ways to practice reflexivity.

Narrative autobiography

The narrative autobiography was initially developed in the methodological literature surrounding autoethnography (Ellis 2004), but it is a powerful resource to tackle personal reflexivity in any project. In this approach to reflective writing, researchers write freely about their background and the motives that led them to conduct their research project, recording specific life experiences that might influence the research. Researchers aim to reflect on how their personal experiences might influence their understandings of participants' accounts and how these insights could potentially shape results (Koopman et al. 2020). We suggest sharing this narrative with at least one other research team member to unearth issues that the author of the narrative might overlook. Ultimately, this exercise will help researchers prepare for interactions with participants by disentangling issues that might hinder rapport building (e.g. assumptions on sensitive topics) (Gentles et al. 2014). We suggest doing this exercise while conceiving the study and during data generation. Narrative autobiography can serve as one of the researcher's first memos or entries in a reflexive journal (Watt 2007; Barrett et al. 2020).

Self-interview

Writing the study protocol includes specifying how the researcher will generate data, which often entails creating specific questions for interviews or focus groups. We recommend those research team members who could be considered insiders to answer their questions and reflect on their assumptions about the topic. Researchers could conduct a self-interview or be interviewed by another research team member (Koopman et al. 2020). These self-interviews are an excellent opportunity for researchers to explore personal experiences and the theories and research that have shaped their views on their topic (Crawley 2012). Self-interviews can be transcribed and analyzed in detail to enable researchers to constantly compare their experiences of the topic to those of the participants (Gentles et al. 2014). This exercise might be best conducted after developing the initial study protocol and before or during data generation. Researchers may even conduct self-interview more than once to understand how their beliefs have evolved throughout the study.

Reader-response exercise

This exercise addresses how the researchers' assumptions might affect their interactions with participants (Mauthner and Doucet 2003). Reader response is conducted during data analysis and involves including a layer of codes representing how researchers react to and interpret participants accounts in relation to their background and personal history (Gilligan et al. 1990). It is helpful to have done a narrative autobiography or a self-interview before this exercise so that the researchers are already aware of their personal reflexive stance. This exercise is paired with reflexive memos to analyze reactions and interpretations in-depth after the coding exercise. These reactions may also form the basis of entries in a journal or other form of reflective writing. The analysis may focus on how the power dynamics between researcher and participant could have influenced both participants' accounts and researchers' reactions.

Structured team-reflexive discussion

One exercise that can help researchers to spark collaborative reflexivity is the team-reflexive discussion. During this exercise, each team member engages in reflective writing to answer personal reflexive questions such as those proposed by Barry et al. (1999):

- In what way might my experience shape my participation in the project?
- What experiences have I had with qualitative research?
- What is my orientation to qualitative research?
- What results do I expect to come out of this project?
- What theories do I tend to favor while analyzing data?
- What is my stake in the research? What do I hope to get out of it?
- What are my fears?

All answers are then shared within the team and discussed. This is a powerful way to understand each team member's position within the research and how this ensemble could impact the results. We believe it is best to conduct this exercise early in the research process to maximize its potential. However, many topics will likely need to be discussed regularly in team meetings throughout the project.

Member reflection

Collaborative reflexive practice can (and likely should) involve collaboration with participants. Early qualitative work saw "member checking" as a way to validate the

truth or accuracy of data (Varpio et al. 2017). However, more recently, qualitative researchers have taken up "member reflection" as a more nuanced approach to "checking in" with participants and other stakeholders, taking into account that data and interpretations are constructed in context, and participants may change their perspective or add new interpretations when they are re-engaged (Tracy 2010; Ravenek and Rudman 2013). This approach is built on the assumption that our research is most credible if we return to participants or knowledge users to work with them to build on our earlier interpretations of their contexts and ideas. Such processes can involve sending participants the raw data and/or researcher interpretations for collaboration and feedback (Birt et al. 2016), or booking follow-up interviews or focus groups to allow participants to respond to results. Ethically, these reflexive processes offer participants a say in how their words are interpreted, ensuring that they can represent themselves and contribute meaningfully to research findings. For example, researchers could conduct follow-up interviews to explore how the research has changed participants' views on the study subject or how their practices have been influenced (Naidu and Sliep 2011). This tool is generally done in the later stages of the research once initial data has been generated, though it could occur throughout concurrent data generation and analysis. More radical approaches to participant engagement might use participatory research designs to engage knowledge users and participants throughout the research lifecycle fully (Finlay 2002b).

How do I write a reflexive manuscript?

As we integrate strategies for reflexivity in our research, we must also work toward robust reporting practices that enable the nuances of reflexive research to shine through, communicating the work's credibility through transparency around the researchers' perspectives and decisions. Part of the impetus for writing this Guide stems from our own disappointing experiences reading, reviewing, and writing reflexivity statements in manuscripts. In many cases, reporting on reflexivity is isolated to a short paragraph such as "researcher characteristics and reflexivity." Instead of this reflexivity section delving into the intricacies of personal reflexivity, these portions of the text become short biographical statements of each author's affiliation and research orientation. Another problematic writing strategy for reflexivity has emerged in the limitations section, where the authors lament how their subjectivity may have prevented them from engaging in objective research (Lingard 2015).

Rather than reporting reflexivity via a discreet paragraph or as an apology for the researcher's influence on the data, we suggest that effective reporting should embrace researcher subjectivity and address the nuances of decisions throughout the research process. Walsh's typology can be instrumental in structuring reflexive reporting practices woven throughout the manuscript, offering the reader an opportunity to journey through the practices and decision-making that shaped the study. However, due to word count limitations, particularly for manuscripts submitted to HPE journals, we recognize that researchers may not have the luxury of reporting the nuanced thinking and teamwork behind every research decision. So instead, we recommend focusing on decisions and dynamics that were most impactful in the research process, highlighting personal, interpersonal, methodological, and contextual dimensions.

Introduction

The introduction is a space where researchers lay out their arguments and core ideas. Thus, they can demonstrate reflexivity by articulating alignment between their paradigm, theoretical or conceptual framework, and research questions or purpose. This includes being transparent about the researchers' paradigmatic and theoretical presuppositions, allowing the reader to understand how this stance influences the results (Varpio and MacLeod 2020). Having a clear picture of the paradigmatic stances of those involved in the research, the reader can understand and evaluate the results in that context. Additionally, researchers should be aware of how the language they use can create contradictory messages. For example, researchers might state in the introduction that they are taking a constructivist stance but then talk about "mitigating bias" or meaning "emerging" from the data in other sections, suggesting a competing post-positivist belief that there is a truth that can be "uncovered" (Varpio et al. 2017).

Methods

The methods section of any manuscript will likely offer the most detail about authors' reflexive practices. Regarding personal reflexivity, we do not believe sections detailing researchers' backgrounds and perspectives constitute a robust reflexivity exercise. Instead, we call on researchers to demonstrate a robust sense of personal reflexivity by explaining how their perspectives impacted the study and how they capitalized on those perspectives. Such descriptions need not be limited to the description of methods; instead, they can be carried throughout the manuscript.

From an interpersonal perspective, reflexivity can be demonstrated by discussing the power differentials and dynamics between participants and researchers and within the research team. Authors should also discuss how these dynamics were considered in recruitment, data generation, analysis, and member reflection (Shulman 1990). Ethically, researchers should discuss how they attended to participants' preferences around anonymity and confidentiality.

Methodological reflexivity entails transparency around how methodological decisions were made. Methodological reflexivity is addressed by carefully describing study decisions and procedures and attending to how and why these decisions were made. For example, rather than writing "we achieved saturation at 12 interviews," reflexive reporting requires the researchers to be more transparent about *how* they decided that their data or analyses were sufficient for the purposes of their study (Mason 2010).

Finally, contextual reflexivity is often overlooked, particularly in studies that do not involve time in the field. To demonstrate contextual reflexivity and legitimate their findings, researchers should articulate how they came to know their context—what their relationship is to the context and how they sought to deepen their appreciation of its nuances and

capitalize on that knowledge in their data. As we noted above, they may also include information on how the research impacted the context, either positively or negatively.

Results

Results sections are often thought of as strictly data presentation. However, we contend that the researchers' voices and interpretations are intimately connected to the results and discussion sections; in other words, the results do not "emerge" by themselves but are instead constructed and interpreted (Varpio et al. 2017). Thus, researchers can demonstrate reflexivity by clarifying where the data they present came from, how it was interpreted, and how it is being used. Strategies for achieving this type of reflexivity might involve discussing the balance of participant quotes and researchers' description in the results (Holmes 2020), or demonstrating the extent to which findings are representative across a data set.

Discussion

Like the results section, the discussion should reflect researchers' active interpretive work and efforts to situate their findings in the broader literature. However, this should not simply be an exercise of finding means of confirming the researchers' interpretations. Instead, we argue that seeking out and presenting aspects of the literature that might challenge researchers' interpretations constitutes important personal and methodological reflexive work.

Perhaps most of all, we would like to end trite reporting of study limitations that seek to meet post-positivist expectations, offering apologies for a small sample size that may seem small or for the study's contextual specificity. Instead, limitations can offer insights into the aspects of the study population and context that are particularly important to help readers assess the transferability of the study's findings to other contexts.

What are the criticisms of reflexivity?

Despite the good intentions behind the practices of reflexivity, we must not close our eyes to some of the criticism surrounding reflexivity as a practice. By addressing these criticisms, we aim to equip the researcher with the necessary understanding to transform these potential problems into opportunities (Finlay and Gough 2008).

Reflexivity as narcissism

Researchers run the risk of overpowering the voice of the participant (Weick 1999) when they narrowly focus on personal reflexivity and define reflexivity solely as a process of critical self-awareness, reflecting on how their background, assumptions, positioning, and behavior impact the research process (Finlay and Gough 2008). Weick (1999) labelled this risk as a form of *narcissism* (p. 894) and pointed to the limitations of personal reflexivity as it can create a '*thin line between interesting insights and self-indulgence in reflexive accounts*' (Nadin and Cassell 2006). Therefore, in their reflexive practices, we encourage researchers not to lose sight of the participants' voices. This is especially pertinent when writing the results section, as we explained earlier, as researchers need to ascertain a good balance between participant quotes and their description of the results (Holmes 2020). Also, practicing personal, interpersonal, methodological, and contextual reflexivity will aid in creating a more balanced approach to reflexivity and the research it aims to strengthen.

Reflexivity as privilege

Reflexivity is an act of bravery: the researcher needs to confront themselves with potentially uncomfortable truths about their assumptions and their research. Admitting to and discussing these uncomfortable truths might be more affordable for some than for others. Mauthner and Doucet (2003) reflect on how completing their PhD's, securing academic positions, and becoming established in their respective fields created a sense of safety that enabled them to confess confusions and ambiguities in their data analysis. Newer researchers may worry that admitting confusion and ambiguity could reflect poorly on their credibility and skills as researchers at a time when they are very vulnerable to the assessments of others. As such, an open dialogue about the practice of reflexivity within the research team, modelling of vulnerability by senior researchers, and discussions about reflexivity within research networks might help normalize reflexivity centered on uncertainty and mistakes in research processes.

Reflexivity as a never-ending hall of mirrors

There is no one way to practice reflexivity. Depending on the epistemological stance of the researcher, different aspects of reflexivity might be foregrounded over others (Day 2012). Although we, like Lynch (2000), see reflexivity as an 'unavoidable feature' in performing qualitative research, overdoing reflexivity might be likened to being stuck in a 'hall of mirrors' (Lynch 2000). One poses the questions: When have we done enough reflexivity? When does it end? The disheartening answer might be 'never,' especially if we see reflexivity as a hallmark of rigorous research that continues throughout the projects' lifecycle. However, a way to check the sufficiency of reflexivity practices is to examine the final manuscript. To convey a clear message to the audience, researchers need to keep sight of the alignment between the research question and the study's theoretical and conceptual grounding, provide clear justification for their methodological choices, put forth a clear description of the research context in the methods section, and balance the participant and researcher voices in the results section (Day 2012). When grounded in concrete practices and transparent reporting, looking in the mirror does not have to feel like you are stuck in an Escher painting (Lynch 2000).

Authors personal reflexivity

We came to this Guide because of a mutual passion for thoughtful qualitative research processes. We were troubled by a lack of theoretical and practical guidance on reflexivity available to HPE researchers interested in doing rigorous qualitative work. Thus, we did not attempt to take a neutral stance regarding the literature on reflexivity. Instead, this Guide represents a combination of our

knowledge and beliefs around effective reflexive practice and a representation of the literature as we see it.

Our team developed expertise in qualitative research through international institutions and interdisciplinary programs; thus, there are many differences in our perspectives. However, we all position our research within subjectivist or social constructionist paradigms, and our stances on reflexivity deeply reflect this perspective. The language used in this Guide explicitly identifies this perspective. Dr Olmos-Vega is an anesthesiologist with a PhD in HPE from Maastricht University. He studies how students learn through social and material interactions in the workplace using sociocultural and socio-material theories. Since he started supervising research projects, he felt frustrated by the lack of a clear guide to reflexivity that could be used by researchers interested in qualitative research. This frustration finally drove him to write this Guide. Dr Stalmeijer is an educationalist with a PhD in HPE from Maastricht University. She has a background in quality management of education and her PhD focused on the evaluation of clinical teachers using Cognitive Apprenticeship theory. She currently studies workplace learning and guidance using sociocultural theories and focuses on foregrounding the interprofessional dynamics present during workplace learning. Dr Varpio's doctoral degree is in English, focusing on rhetoric; her HPE career has been built on careful attention to philosophies of science and how those philosophies impact research practices. Given this background and her active work as a qualitative HPE researcher, she advocates for the need to clarify the foundational principles that uphold rigor across different research paradigms and methodologies—including reflexivity. Dr Kahlke holds a PhD in Education and trained at McMaster University, the University of Alberta, and the University of British Columbia. She uses sociocultural theory and branches of critical theory (such as Critical Race Theory) to conduct her research on trainee and physician agency and social justice in healthcare systems. She has a passion for novel research strategies that can highlight participant voices and manage power dynamics that threaten the social justice aims of her work. This perspective deeply informs her views on interpersonal reflexivity. Drs. Kahlke, Varpio, and Stalmeijer teach qualitative research methodology to graduate students at both Masters and PhD levels and incorporate discussions on reflexivity in their teaching practice. Our team's experience shaped this Guide, and we benefited this research and writing process, which reshaped our understandings of reflexivity in our research and teaching practice. To acknowledge that this article benefits from our collective expertise and subjectivities, we use the first-person plural "we" and "our" throughout this manuscript.

Conclusion

In this AMEE Guide, we have advanced a clear and unified definition of reflexivity. We have explored multiple facets of reflexivity while giving readers tools and strategies to address them. We believe this Guide can provide a straightforward approach to reflexivity practice for those interested in qualitative research. It could also be used as a teaching tool for research supervisors who want to introduce their students and mentees to the world of qualitative research. Finally, we hope that we promote rigorous, high-quality standards in the HPE field through this Guide, cementing a solid foundation to consolidate the growing interest in qualitative research. To close this Guide, we would like to provide four take-home messages:

- Make space and time for reflexivity by embedding it in all aspects of study design; construct a reflexivity plan that includes tools and strategies to actualize reflexivity. Unfortunately, reflexivity often gets lost in the pressing issues of intensive data generation and pressure to complete analyses. However, thoughtless decisions threaten the integrity of qualitative research, and lack of documentation impairs the ability to report on nuanced and reflexive research.
- Embed reflexivity within collaborations; reflexivity relies on challenging assumptions and decisions in thoughtful and collaborative ways. To do this, teams need time to build rapport and grapple with their decisions and data together.
- Explore different types of reflexivity; venture beyond personal reflexivity to include interpersonal, methodological and contextual types in your study. Explore each type's nuances and decide which reflexivity aspect to explore in-depth according to your specific paradigm and methodology.
- Embrace your subjectivity; abandon objectivity as a foundational goal and embrace the power of your subjectivity through meaningful reflexivity practices. Reflexivity is not a limitation; it is an asset in your research.

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